

REMARKS

In the Office Action dated 08/01/01, the Examiner objected to informalities in claims 20, 29 and 30 which are corrected herein.

The Examiner rejected under 35 U.S.C. 112, second paragraph, claims 2, 15, 16, and 25 citing "the need for functional language for 'port adapter' and 'external data interface component.'" Also claim 25 did not conform to the marked version, and the dependencies of claims 29 and 30 needed to be changed. These objections are corrected herein. The functional support is found in the original application on page 8, lines 11 to 20 for the external data interface and lines 1-12 for the port adapter, and on page 9, lines 14-19 also for the port adapter.

The Examiner rejected, under 35 U.S.C. 102(e), claims 1,2,17, 18, 20, 21, 23, 24-27, 29-35, and 37-44 as being anticipated by Imai et al., U.S. patent no. 6,175,874 ('874). The Examiner also rejected claims 9 and 11 under 35 U.S.C. 103(a) citing the '874 patent. And claims 3 and 12 were rejected under 35 U.S.C. 103(a) citing the '874 patent and U.S. patent no. 5,905,723. The 103(a) rejections are overcome by the present amendment and argument.

Regarding claim 1, the Examiner directed attention to '874's Figures 1 and 14 and to columns 3, lines 45-62 and column 4, lines 57-64 and the '874 references a VC - virtual connection.

Claims 1 and 11 are now amended to more specifically point out that the packet headers are inspected to determine those packets belonging to the same flow and the original order of these packets belonging to the same flow. (The other independent

claims 17, 26, 35, and 44 also have this limitation.) This information is found in the network layer of within the packet headers. The '874 patent does not mention ordering of packets or the advantages of maintaining that ordering of packets belonging to the same flow when the flow is being processed by routers or the like.

The '874 patent discusses virtual circuits with reference to TCP/IP protocols in columns 5 and 6. It is well known that at the application layer the sequences of the messages are maintained and/or corrected by the TCP protocol even though the ordering may be lost in the IP protocol. So depending on the protocol, as well described in the original present application, determining packets belonging to the same flow and their order so that the flow and order is maintained as they travel through a routing scheme is advantageous for efficient transfer of the flow information. Moreover, some types of data are efficiently transferred only by maintaining the order as the information travels through the routers, e.g. any real time data, like audio and/or video.

It is respectfully pointed out that the '874 patent does not does not mention and certainly does not suggest keeping track of same flow information or the ordering of the packets in that flow. The Examiner points out that, with respect to column 4, lines 7-64, that hashing according to a "pattern" and the VC with the same protocol will use the same node. However, ordering is not discussed. The '874, in this context, is saying only that hashing the same numbers will produce the same result. But, the present invention determines packets belonging to the same flows wherein the order of the packets remains intact after the hashing.

The present invention in the original application the last sentence on page 12 states: "The hash function can operate using any information that will allow flow preservation." And, the order is necessary to this preservation.

It is instructive that the '874 patent mentions does not mention or realize any advantage to processing packets from the same flow at the internet/data layer in their original order.

The above distinction is highlighted in the '874 patent in column 7, lines 9 et seq. Here the application protocol is HTTP is transferring data over a TCP/IP via a VC, notice that the hash function results in either of two different nodes being used to process. In this case packets from the same flow would not be processed necessarily by the same node. Moreover, the point of the '874 invention is to maintain a single system image and high speed operation in the face of node failure or restoration, see column 12, third paragraph. That is one addressing image, but using different nodes.

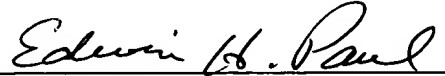
Independent claims, 1, 11, 17, 26, 35 and 44 all contain the limitation of maintaining the order of the packets as they are being processed by the nodes. Therefore all claims remaining in the application are now allowable.

It is respectfully requested that, if possible, the Examiner call Applicant's attorney to discuss this response and amendment at (617) 951-3040.

It is believed that no additional fee is needed, but, if there is such a charge please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,

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